CLAIMS

1. Local radio communication device comprising at least:

   - one IP point of access (1c) adapted to communicate at least outwards from the network in IP mode,

   - a point-to-point communication module (1a) adapted to communicate at least with a terminal (4, 5) according to at least one point-to-point communication protocol,

   - and a first interface (1b) adapted to allow the IP access point (1c) to communicate with the point-to-point communication module (1a),

   characterized in that the first interface (1b) is adapted to be presented to an electronic device (2, 3) communicating in IP mode with the IP access point (1c), in the form of at least one virtual port and the said first interface (1b) is adapted to be controlled by the said electronic device by means of control instructions.

2. Local radiocommunication device according to claim 1, in which the point-to-point communication module (1a) is adapted to communicate with the terminal (4, 5) by a serial radio link.

3. Local radiocommunication device according to claim 2, in which the point-to-point communication module (1a) is adapted for communicating with the terminal (4, 5) according to the "BLUETOOTH" protocol by using a predefined serial port profile in the said "BLUETOOTH" protocol.

4. Local radiocommunication device according to any one of the aforementioned claims, in which the IP access point (1c) is connected to the Internet network (6).

5. Local radiocommunication device according to claim 4, in which the IP access point (1c) comprises an ADSL interface (1d) suitable for access to the Internet network (6).

6. Local radiocommunication device according to any one of the aforementioned claims, in which the IP access point (1c) communicates with a local electronic device (2, 3) in IP mode.

7. Local radiocommunication device according to claim 6, in which the IP access point (1c) communicates in IP mode with the local electronic device (2, 3) by radio channels according to the standard IEEE 802.11.

8. Local radiocommunication device according to claim 6, in which the IP access ·point (1c) communicates in IP mode with the local electronic device (2, 3) by a link chosen between a USB link and an Ethernet link.

9. Local radiocommunication according to any one of the aforementioned claims comprising, moreover, the said electronic device (2, 3) and in which the electronic device (2, 3) is adapted to be connected to a predetermined IP address corresponding to the said access point (1c) during the opening of the said virtual serial link, and thus to control the said first interface (1b) by the "AT" instructions.

10. Local radiocommunication device according to any one of the aforementioned claims, in which the first interface (1b) is adapted to be presented to the electronic device (2, 3) communicating with the IP access point (1c), in the form of several virtual serial ports corresponding respectively to several terminals (4, 5) adapted to communicate by radio with the point-to-point communication module (1a).

11. Local radiocommunication device according to any one of the aforementioned claims, in which the first interface (1b) is adapted to:

- indicate, to an electronic device (2, 3) communicating with the IP access point, several terminals (4, 5) with which the said point-to-point communication module (1a) can communicate,

- and route the communications between the electronic device (2, 3) and the said terminals (4, 5) according to commands received from the said electronic device communicating with the IP access point (1c).

5   12. Local radiocommunication device according to claim 11, in which the terminals (4, 5) indicated by the first interface (1b) to the electronic device (2, 3) communicating with the IP access point, are predetermined terminals, recognized in advance by the said interface.

10   13. Local radiocommunication device according to any one of the aforementioned claims, in which the first interface (1b) communicates in IP mode with at least one electronic device by the IP access point, this electronic device being adapted to provide at least one function, and

15 the point-to-point communication module (1a) is adapted to be presented to the terminal (4, 5) as a device providing the said function (printer, computer, website, etc.).

14. Local radiocommunication device according to claim 13, in which the point-to-point communication module

20 (1a) is adapted to be presented to the terminal (4, 5) as several devices providing several functions.

15. Local radiocommunication device according to claim 14, in which the point-to-point communication module (1a) communicates with the said terminal (4, 5) according

25 to the "BLUETOOTH" protocol and is adapted to identify itself in "BLUETOOTH" mode like the said several devices.

16. Local radiocommunication device according to any one of claims 13 to 15, in which the point-to-point communication module (1a) is adapted to be presented to the

30 terminal (4, 5) at least like a printer, and to route the data to be printed, received from the terminal (4, 5), to a printer (3) that communicates in IP mode with the IP access point (1c).

17. Local radiocommunication device according to

35 any one of claims 13 to 16, in which the point-to-point

communication module (1a) is adapted to be presented to the terminal (4, 5) at least like a serial port, and to route a communication initiated by the terminal (4, 5), to an electronic device (2) that communicates in IP mode with the
5   IP access point (1c).

18. Local radiocommunication device according to claim 17, in which the terminal is a personal digital assistant (4), the electronic device is a computer (2) communicating locally in IP mode with the IP access point
10   (1c), the digital assistant (4) and the computer (2) being adapted to mutually update predetermined files according to data contained in the said digital assistant and data contained in the said computer.

19. Local radiocommunication device according to any
15   one of the aforementioned claims, in which the first interface (1b) is adapted to:

- indicate, at least to the terminal (4, 5), the entities (2, 3, 6a) with which the said terminal (4, 5) can communicate in IP mode by means of the said IP access point
20   (1c),

- and route at least some communications between the said terminal (4, 5) and the said entities (2, 3, 6a) according to commands received from the said terminal (4, 5).

25   20. Local radiocommunication device according to any one of the aforementioned claims, in which the first interface (1b) is adapted to route at least some communications initiated by the said terminal (4, 5) automatically towards a predetermined entity (2, 3, 6a).

30   21. Local radiocommunication device according to any one of the aforementioned claims, in which the first interface (1b) is adapted to transfer, according to the "OBEX" protocol, objects between an entity (2, 3, 6a) communicating in IP mode with the IP access point (1c), on
35   the one hand, and the said terminal (4, 5) on the other.

22. Local radiocommunication device according to any one of the aforementioned claims, in which the first interface (1b) is adapted to transfer, on request, the objects of the terminal (4, 5) between the said terminal (4, 5) and a predetermined storage entity (2, 6a).

23. Local radiocommunication device according to any one of the aforementioned claims, in which the first interface (1b) is adapted to transfer, on request, the objects of an electronic device (2) communicating in IP mode with the IP access point (1c) between the said terminal (4, 5) and the said electronic device (2) communicating with the IP access point.

24. Local radiocommunication device according to any one of the aforementioned claims, in which the point-to-point communication module (1a), the first interface (1b) and the IP access point (1c) are combined in an Internet communication terminal (1).

25. Local radiocommunication device according to any one of the aforementioned claims, in which the said virtual port is a serial port.

26. Local radiocommunication device according to any one of the aforementioned claims, in which the said control instructions are instructions of the "AT" type.